

REMARKS

This Amendment is in response to the Office Action mailed November 18, 2003. In the Office Action, claims 1-14 and 16-26 were rejected under 35 U.S.C. §102. In addition, claims 16 and 19 were rejected under 35 U.S.C. §103(a). Applicants respectfully traverse these rejections in their entirety.

I. REJECTION UNDER 35 U.S.C. §102

A. §102(A) REJECTION

Claims 1-14, 17, 18, and 20-26 were rejected under 35 U.S.C. §102(a) as being anticipated by Barzilai, et al. (Barzilai), “Design and Implementation of an RSVP-Based Quality of Service Architecture for an Integrated Services Internet,” IEEE April 1998. With respect to claim 1, it is alleged that Barzilai discloses “an apparatus adapted to facilitate communications between a client device and a remote device, comprising a network interface including (i) filters to control access to different service levels and (ii) a classifier, communicatively coupled to the filters, to classify and mark one of the service levels associated with a received data packet in response to satisfying filter criteria associated with at least one filter.” [See *pages 2-3 of the Office Action*]. Applicants respectfully disagree because a *prima facie* case of anticipation has not been met.

In order to anticipate a claim, Barzilai must teach every element of the claim. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” See Verdegaal Bros. v. Union Oil of California, 814 F2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Applicants respectfully disagree with the outstanding rejection as applied to both independent claims 1, 13 and 21 because Barzilai does not teach each and every limitation set forth herein.

For instance, on page 398 (column 1, paragraph 1-3), Barzilai teaches a communication scheme in which data sockets are associated with a session handle. When data is sent on a socket for which a reservation exists, a protocol-specific SEND function is called, which obtains kernel buffers from the data. These buffers are allocated in advance and managed by a Quality of Service (QoS) manager. If a buffer is available, data is copied into the available buffer and is marked with a session handle. As the data traverse through the protocol stack, the “session handle” carried in the buffer header is used as a classifier for session-specific handling of the packet.

Based on the above-identified teachings, it appears that the Examiner considers the session handle to be equivalent to the classifier (means for classifying) as set forth in claims 1 and 21. If such is the case, Barzilai offers no teachings of a session handler communicatively coupled to the filters, nor any teachings of the network interface including filters as claimed. Based on this fact alone, withdrawal of the §102(a) rejection for independent claims 1 and 21 is warranted.

Moreover, with respect to independent claims 1, 13 and 21, Barzilai describes a QoS manager being functionally equivalent to a control plane component and the QoS manager being primarily responsible for “the creation, modification, and removal of reservations associated with different flows.” Nowhere does Barzilai describe or even suggest that the QoS manager dynamically creates or removes reservation *filters*, much less the removal of filters *based, at least in part, on an admissions profile*. Emphasis added. [See Page 400, col. 2, paragraph 4 of Barzilai].

Applicants respectfully request withdrawal of the §102(a) rejection against independent claims 1, 13 and 21 and those claims dependent thereon. Applicants reserve the right to further traverse the grounds for rejection associated with the above-listed independent claims as well as any dependent claim.

B. §102(e) REJECTION

Claims 1-14 and 16-26 are rejected under 35 U.S.C. §102(e) as being anticipated by Wittig, et al. (Wittig), "Network Layer Scaling: Congestion Control in Multimedia Communication with Heterogeneous Networks and Receivers", allegedly published in 1994. Applicants respectfully traverse the rejection. Applicants respectfully disagree.

With respect to claims 1 and 21, contrary to the statements set forth on paragraph 35 of the Office Action, pages 275 and 283 of Wittig do not describe a classifier (means for classifying) that is communicatively coupled to the filters (filter means) and classifies and marks service levels associated with a received data packet in response to satisfying filter criteria. Moreover, the alleged teaching of filters being changed in the stream setup phase as well as dynamically at run time does not provide sufficient teachings of a controller to dynamically create and remove filters based, at least in part, on an admissions profile as further claimed. In light of foregoing, withdrawal of the §102(e) rejection against independent claims 1 and 21 (and all claims dependent thereon) is warranted.

With respect to claim 13, pages 275 and 283 of Wittig do not describe an operation of a command being issued by a bandwidth broker to a controller of the network edge device. Therefore, withdrawal of the §102(e) rejection against independent claim 13 and all claims dependent thereon is warranted.

II. REJECTION UNDER 35 U.S.C. § 103

Claims 16 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barzilai in view of what was well known to the ordinary artisan in the networking art at the time the invention was made. In accordance with MPEP § 2144.03, Applicants respectfully traverse the Official Notice and respectfully requests withdrawal of this rejection.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1 1. (Twice Amended) An apparatus adapted to facilitate communications between a
2 client device and a remote device, comprising:

3 a network interface including (i) filters including at least one filter being triggered to
4 denote when a received packet satisfies filter criteria associated with the at least one filter [to
5 control access to different service levels] and (ii) a classifier, communicatively coupled to the
6 filters, to classify and mark one of the service levels associated with [a] the received data packet
7 in response to satisfying the filter criteria associated with the at least one filter; and

8 a controller coupled to the network interface, to dynamically create and remove the filters
9 controlling access to the different service levels based, at least in part, on an admissions profile.

1 2. (Amended) The apparatus of claim 1, wherein the at least one filter when
2 triggered, initiate an admission control decision preventing premature allocation of service level
3 resources which are not yet required or authorized.

1 3. (Amended) The apparatus of claim 2, wherein each of the filters is triggered by
2 information contained within the received data packet.

1 4. (Amended) The apparatus of claim 3, wherein each of the filters is triggered by
2 one or both of packet source information and packet destination information.

1 5. The apparatus of claim 1, wherein the admissions profile is stored in a
2 communicatively coupled remote device.

1 6. The apparatus of claim 5, wherein the communicatively coupled remote device is
2 a bandwidth broker or other generic policy server.

1 7. The apparatus of claim 1, wherein the admissions profile is available locally
2 within the apparatus.

1 8. (Amended) The apparatus of claim 1, wherein the controller establishes an
2 ingress profile in response to detecting an associated trigger event, wherein the ingress profile
3 modifies the received data packet adhering to the filter criteria to denote a particular service
4 level, in accordance with the admissions profile.

1 9. The apparatus of claim 8, wherein the controller removes ingress profiles when
2 data packets adhering to the filter criteria are no longer received, liberating apparatus resources.

1 10. The apparatus of claim 8, wherein the controller removes ingress profiles after a
2 predetermined period of time, liberating apparatus resources.

1 11. (Amended) The apparatus of claim 1, wherein the controller removes at least one
2 of the filters in accordance with a network administration policy.

1 12. (Amended) The apparatus of claim 11, wherein the controller removes at least
2 one of the filters based, at least in part, on time-of-day.

1 13. (Amended) A method for controlling provision of differentiated services in a data
2 network, the method comprising:

3 (a) installing a filter on a network edge device to provide a trigger notification upon
4 detecting data packets adhering to filter criteria;
5 (b) determining whether a received data packet satisfies the filter criteria; and
6 (c) issuing a command by a bandwidth broker to a controller of the network edge
7 device to dynamically install or remove a filter in response to determining whether the received
8 data packet satisfies the filter criteria.

1 14. (Amended) The method of claim 13, further comprising (d) marking the received
2 data packets adhering to the filter criteria according to a subscribed service level.

1 15. (CANCEL)

1 16. The method of claim 14, wherein the marking of the received data packet includes
2 setting a logic value of a bit in a Type of Service (ToS) field of a header of the data packet.

1 17. The method of claim 14 further comprising:
2 (e) identifying and marking the received data packets with routing information in
3 accordance with the subscribed service level.

1 18. The method of claim 17 further comprising:
2 (f) placing the data packets in a proper format for transmission.

1 19. The apparatus of claim 1, wherein the classifier marks a Type of Service (ToS)
2 field of the received data packet to denote a level of service for transmission of the data packet.

1 20. The apparatus of claim 1, wherein the controller further dynamically controls
2 access to at least one classifier profile in accordance with the admission profile.

1 21. (Amended) An apparatus adapted to facilitate communications between a client
2 device and a remote device, comprising:
3 filter means for controlling access to different service levels;
4 means for classifying and marking one of the service levels associated with the received
5 data packet in response to satisfying filter criteria associated with the filter means, the means for
6 classifying being communicatively coupled to the filter means; and
7 control means for dynamically creating and removing a portion of the filter means based
8 at least in part on an admission profile.

1 22. The apparatus of claim 21, wherein the admissions profile is stored in a
2 communicatively coupled remote device.

1 23. The apparatus of claim 22, wherein the communicatively coupled remote device is
2 a bandwidth broker or other generic policy server.

1 24. The apparatus of claim 21, wherein the filter means comprises a plurality of
2 filters.

1 25. The apparatus of claim 24, wherein the control means removes at least one of the
2 filters in accordance with a network administration policy.

1 26. The apparatus of claim 25, wherein the control means removes at least one of the
2 filters based, at least in part, on time-of-day.

CONCLUSION

In view of the amendments and remarks made above, it is respectfully submitted that all pending claims are in condition for allowance, and such action is respectfully solicited.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on: February 18, 2003.



Corrinn R. Reynolds 2/18/03
Date